V. REMARKS

Claims 1, 2, 4-9, 12 and 13-17 are rejected under 35 U.S.C. 102(b) as anticipated by Ikeda et al. (U.S. Patent No. 6,652,358). The Examiner believes that all of the features of these claims are taught in this reference.

Ikeda teaches a double side simultaneous grinding machine. A plate-like workpiece is held and ground simultaneously on both a front surface and a back surface using a pair of grinding stones provided oppositely at both sides of the workpiece. A relative position between at least the center of thickness of the plate-like workpiece or the center of the holding means for holding the workpiece and the center between stone surfaces of the pair of grinding stones is controlled during grinding. In a double side simultaneous grinding method, the generation of warpage of the plate-like workpiece is suppressed and degradation of warpage is prevented. Thereby, the plate-like workpiece can be processed to have high flatness on both sides. Further, the plate-like workpiece can be ground while a degree of warpage is controlled so that the workpiece is processed to have a warpage of a desired degree.

Claim 1, as amended, is directed to a both-side grinding method for thin disc work in which the thin disc work is rotationally supported and a pair of grinding wheels rotating at a high speed are fed in the axial direction of its grinding wheel spindle in order to simultaneously grind both surface and back sides of the work by grinding surfaces of the grinding wheels, comprising the steps of:

rotationally supporting the work by a work supporting means in a state such that the work is between the grinding surfaces of the paired grinding wheels and the surface and back of the work are opposed to the grinding surfaces;

measuring the distances from the predetermined position to the surface and back of the work at three points at least by using a non-contact type distance sensor when the feeding operation of the grinding wheels is completed;

detecting the amount of deformation of the work from the results of measurement at the three points at least; and

in case the calculated amount of deformation exceeds a specified value, making moving adjustment of the grinding wheels in accordance with the amount of deformation so that the work is flat without deformation when the feeding operation of the grinding wheels is completed.

Claim 1 further recites that the work supporting means comprises a hydrostatic supporting means which supports the surface and back of the work with hydrostatic fluid in a non-contact state, and recites that the hydrostatic supporting means is provided with the at least three non-contact type distance sensor measuring the distances at the at least three points.

Claim 7, as amended, is directed to a both-side grinding machine for thin disc work in which the thin disc work is rotationally supported and a pair of grinding wheels rotating at a high speed are fed in the axial direction of the grinding wheel spindle in order to simultaneously grind both surface and back sides of the work by grinding surfaces of the grinding wheels includes a pair of grinding wheels, a work supporting means, a grinding wheel adjusting means, a work measuring means and a wheel position control means. Claim 7 recites that the pair of grinding wheels disposed so that the grinding surfaces at the ends of the grinding wheels are opposed to each other. Claim 7 recites that the work supporting means which rotationally supports the work in a state such that the work is between the grinding surfaces of the paired grinding wheels and the surface and back of the work are opposed to the grinding surfaces. Also, claim 7 recites that the grinding wheel adjusting means for adjusting the position of the grinding wheel. Additionally, claim 7 recites that the work measuring means which measures distances from a predetermined reference position to the surface and back of the work rotationally supported by the work supporting means at three points at least when the feeding operation of the grinding wheels is completed, and calculates the amount of deformation of the work being rotationally supported from the results of measurement at the three points. Further, claim 7 recites that the wheel position control means for controlling the grinding wheel adjusting means in accordance with the measurement results of the work measuring means.

Furthermore, claim 7 recites that the work supporting means comprises a hydrostatic supporting means which supports the surface and back of the work with hydrostatic fluid in a non-contact state, and recites that the work measuring means comprises at least three non-contact type distance sensors for measuring the distances at the at least three points, and the at least three non-contact type distance sensors are provided on the hydrostatic supporting means.

It is respectfully submitted that the rejection is improper because Ikeda et al fails to teach each element of claims 1 and 7 as amended. Specifically, it is respectfully submitted that Ikeda et al. fails to teach that the work supporting means comprises a hydrostatic supporting means which supports the surface and back of the work with hydrostatic fluid in a non-contact state, and fails to teach that the hydrostatic supporting means is provided with the at least three non-contact type distance sensor measuring the distances at the at least three points, as recited in claim 1, or that the work supporting means comprises a hydrostatic supporting means which supports the surface and back of the work with hydrostatic fluid in a non-contact state, and fails to teach that the work measuring means comprises at least three non-contact type distance sensors for measuring the distances at the at least three points, and the at least three non-contact type distance sensors are provided on the hydrostatic supporting means, as recited in claim 7.

As a result, at least for the reasons above, it is respectfully submitted that claims 1 and 7 are allowable over Ikeda et al.

Claims 2 and 4-6 depend from claim 1 and include all of the features of claim 1. Claims 8, 12 and 13-17 depend from claim 7 and include all of the features of claim 7. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reasons the independent claims are allowable as well as for the features they recite.

Claim 9 is canceled and therefore the rejection as applied thereto is now moot.

Withdrawal of the rejection is respectfully requested.

Claims 3, 10 and 11 are rejected under 35 U.S.C. 103(a) as unpatentable over Ikeda in view of Official Notice. The rejection is respectfully traversed.

Claim 3 depends from claim 1 and includes all of the features of claim 1. Thus, it is respectfully submitted that claim 3 is allowable at least for the reason claim 1 is allowable as well as for the features it recites.

Claims 10 and 11 depend from claim 7 and include all of the features of claim 7. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reason claim 7 is allowable as well as for the features they recite.

Withdrawal of the rejection is respectfully requested.

Newly-added claim 18 also includes features not shown in the applied art.

Further, Applicants assert that there are also reasons other than those set forth above why the pending claims are patentable. Applicants hereby reserve the right to submit those other reasons and to argue for the patentability of claims not explicitly addressed herein in future papers.

In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

Respectfully submitted,

Date: February 22, 2006 By: _____

David T. Nikaido
Reg. No. 22,663

Carl Schaukowitch
Reg. No. 29,211

RADER, FISHMAN & GRAUER PLLC
1233 20th Street, N.W. Suite 501
Washington, D.C. 20036
Tel: (202) 955-3750
Fax: (202) 955-3751
Customer No. 23353

Enclosure(s): Amendment Transmittal

DC224711.DOC